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PRESENT VIEWS ON INTUBATION OF THE LARYNX,

—BY—

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PRESENT VIEWS ON INTUBATION OF THE LARYNX,

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When what some have been pleased to call "the present revival of intubation" began to spread in the profession, it was taken up with American enthusiasm and treated to an unprecedented "boom." The journals teemed with articles upon the subject, hundreds of cases of instruments were sold. It was called "the operation for the general practitioner," "every man his own intubator," was the cry. Men unskillful at any kind of operation commenced on intubation because it was bloodless and said by some to be easy. The operation was done almost indiscriminately and statistics manufactured galleys long.

This could not last a great while without a reaction. Articles appeared declaring intubation "inferior to tracheotomy," inefficient, "unsurgical and useless," denouncing it as "brutal." It was objected to on account of its difficulty, because of the liability of pushing membrane before it, thus choking the patient; because of the difficulty in administering food, or worse yet, drink; because of "food pneumonia," liability of the tube to slip down into trachea or of being coughed up and swallowed, ulceration of larynx or trachea from pressure, irritation as of a foreign body occasioned by the presence of the tube in the larynx, retention of mucous or pus below the tube, the air continuing to pass through septic channels, laceration of larynx in efforts at introduction of the tube, or more likely in efforts at its extraction; last, not least, criminal delay about resorting to tracheotomy by fooling away time on intu-

bation. The boom began to decline somewhat. Intubating sets could be bought cheap at second hand.

Not that all the early opinions were laudatory and all the recent ones condemnatory. The subject was warmly handled both pro and con. As a rule the early effusions held more of praise, the next period showing a majority of writers in dispraise, while in the present period the operation is likely to be fairly considered and receive the final judgment of the profession.

Upon closer inquiry many of the opinions and objections against intubation are found to possess little weight, while others may be justly balanced off with equally weighty difficulties in the alternative operation tracheotomy.

Having saved many lives by its use, no one can convince me that intubation is inefficient. In fairness it can no more be considered unsurgical than would the reduction of an intussusception by injection of warm water before resorting to cœliotomy. Any operation may be "brutal" if done by a brutal operator, but when done by a kind and careful operator, intubation is of itself certainly less harsh or revolting than tracheotomy. This is evidenced by the fact that parents will stand by and willingly see a child intubated, at the same time forbidding any cutting to be done. On the score of its difficulty no man equally familiar with both operations will pronounce intubation the more difficult. This objection was usually urged by operators more or less familiar with tracheotomy but who had had only a comparatively short experience in the newer operation. Its difficulties only make the rule that it should be done by those who have by practice acquired skill. There is a possibility of pushing membrane before the tube and suffocating the patient, but this has also occurred in introducing a tracheotomy tube, while it seems to me the chances are much less of causing sudden death by this accident than they are by either shock or hæmorrhage in tracheotomy. The difficulty of administering food and drink has disappeared since the practice of placing the patient on an inclined plane head downward has been used. The simplicity and ease of this manœuvre make feeding as nothing for the nurse

to do, compared with the constant attention required by a tracheotomized patient. If a tube of proper size is chosen it does not slip down into the trachea. This accident need not happen oftener than for a brush or a pledget of cotton to be lost into an opened trachea. The dropping of an intubation tube into the trachea, or into the esophagus, oftenest occurs through the carelessness of introducing the tube without the thread attached. If a tube were to be coughed up and swallowed it would generally be passed without trouble. Ulceration from pressure of tube is not more liable to occur in intubation than in tracheotomy. Nor does the O'Dwyer tube cause irritation as of a foreign body more than is caused by the presence of a tracheotomy tube. Mucus and pus are not more apt to collect below the tube in intubation cases than they would below a tracheotomy tube if it were not removed occasionally. The intubation tube itself is not as apt to become clogged as is the tracheotomy tube, while the former, if it fits properly, not too tightly, and should become occluded by a piece of false membrane, will be coughed out. Not so a tracheotomy tube when, as usual, tied in. It must be instantly removed by a vigilant and dextrous nurse to prevent suffocation.

It is said that in intubation the air continues to pass through septic channels, that is, over the diseased surfaces. Who can tell how much of the blood poisoning is caused by the air that has passed over diseased surfaces as compared with the amount caused by direct absorption beneath those surfaces? and how small is that amount of poison compared with that likely to occur in a tracheotomy wound? Moreover, that air current can be loaded with antiseptic vapors and thus applied directly to those diseased surfaces. Then, besides, in intubation the air is warmed and moistened by passing through natural channels, and we all know that in some environments it would be impossible to get proper attention paid to warmth and moisture of air for a tracheotomy case.

To object to intubation because lacerations of the larynx have occurred in efforts of operators to introduce or to extract the tube would be like objecting to tracheotomy because it has occurred that

an operator has missed the trachea altogether, dissecting down to one or other side of it, or has punctured not only into the trachea but through the trachea into the esophagus, and at least in one recorded instance into the vertebra, or has pushed the tracheotomy tube down in front of the trachea instead of into the trachea, or has been so unfortunate as to have air enter a severed vein, or air to dissect its way between the fasciæ of the neck or into the mediastinum. Accidents may occur during any operation, but care and skill make them rare.

Delay in resorting to tracheotomy would indeed be criminal if tracheotomy was indicated. But there is no need of dangerously delaying tracheotomy if required because intubation has been first performed. That is a great advantage in intubation, that it does not prevent nor prejudice the chances of subsequent tracheotomy.

It seems to me that a careful comparison must convince any fair-minded observer that the operation has merits, has its place, which can be determined by the good judgment in a given case. There can be no doubt that intubation was injudiciously used both by inexperienced operators which led to bad results, and on the other hand by enthusiasts, who, for the purpose of making money and statistics, would intubate a well man on the street, if permitted. As to the value of statistics in general in determining a subject of this kind I hold to the opinion of Furneux Jordon, the famous surgeon of Birmingham. He expresses himself as follows (*Surgical Enquiries*, p. 167): "Statistical enquiry in the inexact sciences has misled as often as it has led. There are more avenues for errors to creep into statistics than there are avenues for errors to creep into the opinions of trained observers. If six competent surgeons tell me one thing and the statistics of 600 hospitals tell me another, I believe the six surgeons."

As illustrating the difficulty of comparing the merits of tracheotomy and intubation by mere numbers, I may mention an instance where two children in one family were intubated and both died, a third child in the same family was taken sick and the same intubator declined to operate, pronouncing the case necessarily fatal.

The family physician performed tracheotomy and the child recovered. It might have if intubated, or the others might have if tracheotomized. I will cite a case from my own practice. Being called by the attending physician to intubate, I declined because the obstruction was on the epiglottis where the tube could do no good; it grew worse. Other counsel was called and it was decided that tracheotomy must be done. I was called in to do the tracheotomy, but declined for the reason that I did not think the dyspnœa so great but that the chances were better without operation than with it. The child recovered. It might have recovered if either intubated or tracheotomized, and counted one on my list of cases in favor of whichever operation had been done. Each case must be judged by itself.

Intubation has come to stay. There is no fair comparison of the "present revival" with any previous attempt in the same line. Bouchut's tubes in 1858 were like mere open end thimbles and their method of use correspondingly imperfect. He had the crude idea right but could not execute it. It was left for O'Dwyer's mechanical genius to work out perfection in the tubes, and so near perfection in the accessory instruments and methods of their use that, notwithstanding many attempts, very little if any improvement has been effected by newer modifications. Casselberry's plan of lowering the head of patient to feed is as good a thing as has been added to the original plan. Waxham has a gag with a different catch, and so on. Some operators wear a ring on the fore finger, some a piece of adhesive plaster across the back of the finger, but these differences are of no moment. Some children will hold the mouth open voluntarily, others will if the assistant who stands behind to steady the head will press his thumbs firmly against the cheeks, I have never found any advantage in up-your-sleeve sleight-of-hand trickery in handling instruments. Nor is it often if ever necessary, as recommended by Ashby and Wright, to anæsthetize the patient in order to remove the tube. Otherwise the teaching upon this subject in their excellent text book on the diseases of children gives the most liberal recognition afforded intubation by any European

book. The fact that an anæsthetic is seldom required is a point in favor of intubation. Thorough cleanliness and antiseptic principles should be carefully observed in the practice of intubation. The use of the same tubes and other throat instruments indiscriminately in diphtheritic or syphilitic and in non-contagious cases is especially reprehensible. Another abuse is the cessation of medical treatment when the tube is placed in the throat. Because the mechanical obstruction to respiration has been mechanically relieved for the time being, is no reason why we should cease administering drugs directed against the pathological condition. One should continue the treatment by way of the stomach, by local applications, by lime steam. Sometimes too much reliance is placed upon the operative aid, and the disease, baffled temporarily, renews the attack in another quarter and the patient finally succumbs.

In conclusion, I reiterate my belief that intubation has come to stay. It will be permanently recognized by the profession as one of the standard life saving operations. The more one studies it and practices it the more he must admire the ingenuity, the patience and the thoroughness with which O'Dwyer worked it out. It will not supplant tracheotomy. Each operation has its field of usefulness; each its rational and recognizable indications.